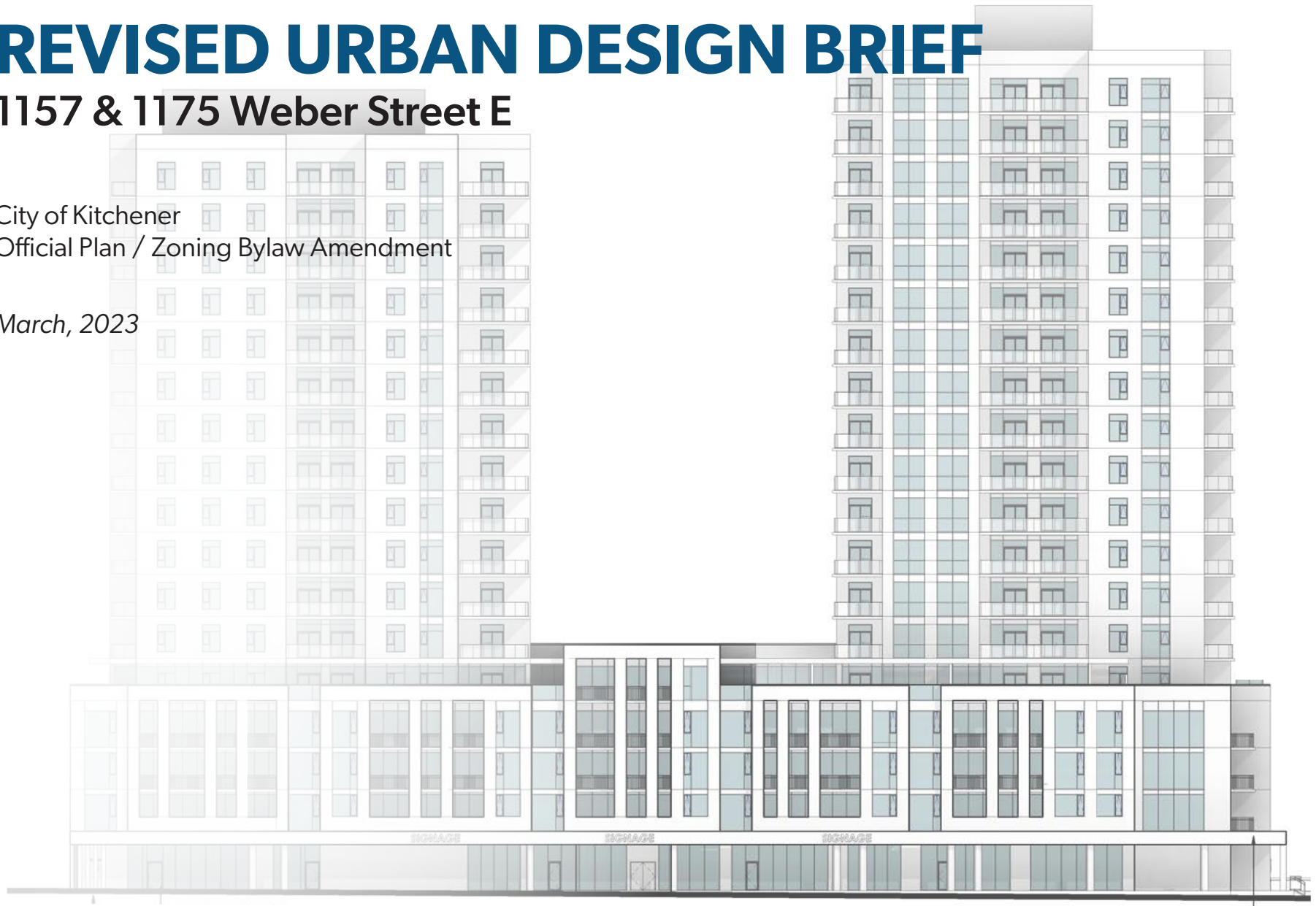


# REVISED URBAN DESIGN BRIEF

## 1157 & 1175 Weber Street E

City of Kitchener  
Official Plan / Zoning Bylaw Amendment

March, 2023



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Franklin St N

Weber St E

King St (Hwy 8)



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# 1. BACKGROUND AND PURPOSE

## 1.1 Proposal

This is an updated Urban Design Brief that has been prepared by GSP Group Inc. on behalf of MKG Holding Corporation (the “Applicant”) for property at 1157 and 1175 Weber Street E (the “Site”) in Kitchener. This Brief is to provide the rationale for the Revised Development Plan of a multi-storey mixed-use building. The proposed re-design of the development comprise of 366 square metres of ground floor commercial space and two residential towers, one at 19 storeys (Tower A) and the other at 17 storeys (Tower B) siting atop 4-storey podium. Underground parking and structured parking are proposed with access provided from Weber Street E and Franklin Street N.

## 1.2 Purpose

The purpose of the Brief is to explain how the proposed development conforms with the City’s urban design objectives in creating complete and healthy communities. The Brief also discusses the design changes that have been made to the previous design in response to staff recommendations and public comments.

An Official Plan Amendment (“OPA”) and a Zoning By-law Amendment (“ZBA”) are required in order to facilitate the proposed development on the Site and an Urban Design Brief was identified as a requirement of these applications. The Kitchener Official Plan defines an Urban Design Brief as an “urban design document that may be required of an owner/applicant to demonstrate how a development application implements the City’s Urban Design Manual”, which “does not require Council approval”.

Based on the matters for consideration and evaluation identified in pre-submission consultation record, this Urban Design Brief:

- Describes the existing physical conditions on the Site (Section 2);
- Describes the existing neighbourhood context surrounding the Site (Section 3);
- Describes the proposed development (Section 4);
- Summarizes the principal City policy and guideline documents applicable to the subject Site and the relevant sections as they relate to the proposed development (Section 5);
- Summarizes how the proposed development responds to relevant City urban design policies and guidelines (Section 6); and
- Makes conclusions regarding the findings (Section 7).

## 1.3 Supporting Studies & Materials

This Urban Design Report has considered the following plans and reports prepared in support of the subject applications:

- Site Plan prepared by ABA Architects;
- Floor Plans prepared by ABA Architects;
- Preliminary Elevations prepared by ABA Architects;
- Shadow Impact Analysis drawings prepared by GSP Group; and
- Pedestrian Wind Analysis prepared by RWDI.

## 2. EXISTING SITE CONDITIONS AND CONTEXT

### 2.1 Location and Description

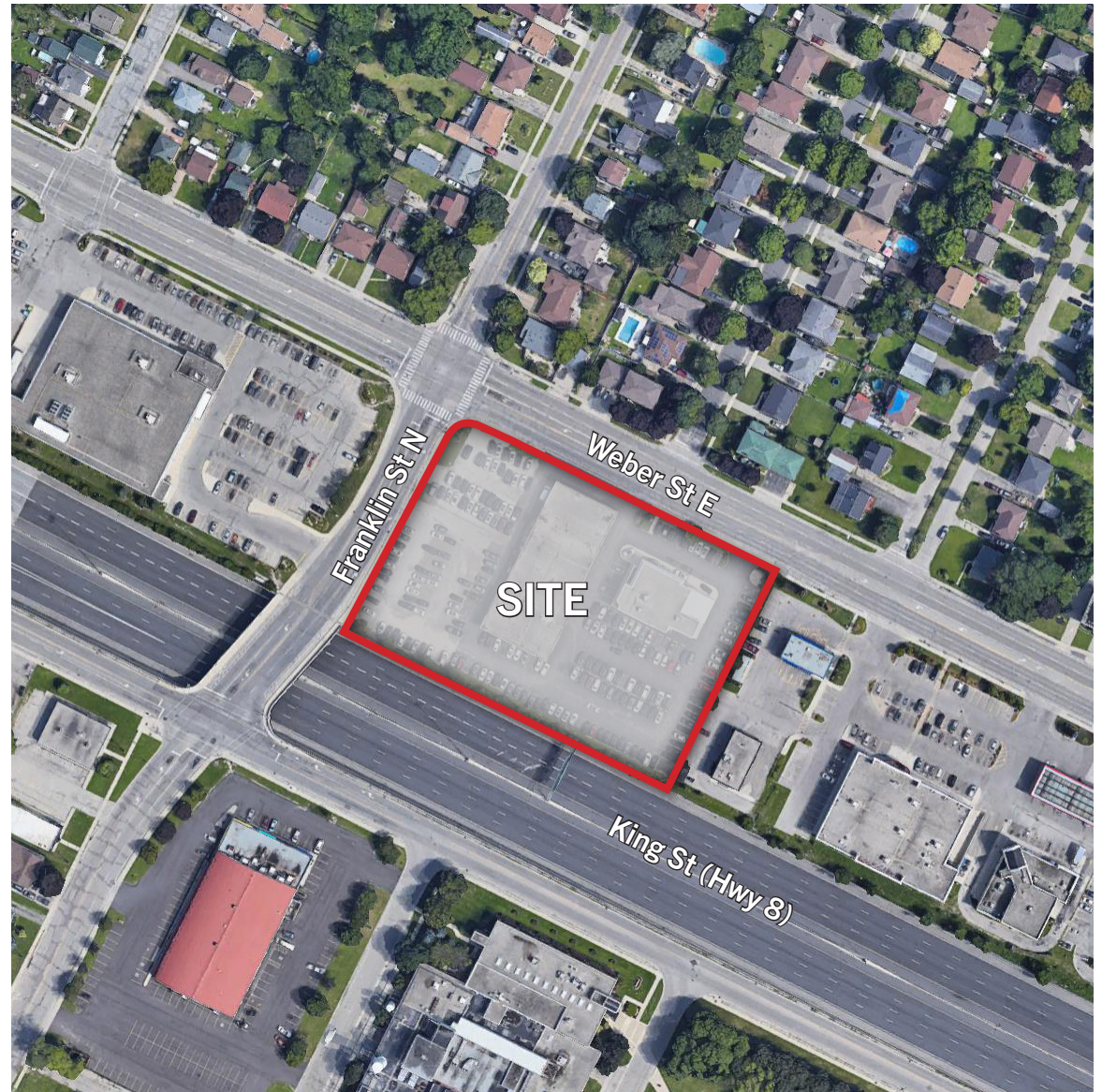
The Site is located on the southeast corner of Franklin Street N and Weber Street E, municipally addressed as 1157 and 1175 Weber Street E, Kitchener. The Site is approximately 1.0 hectares (2.4 acres) in area and rectangular in shape. The Site has a frontage of approximately 60 metres wide along Franklin Street N and approximately 110 metres of depth along Weber Street E.

### 2.2 Existing Conditions

The Site is currently occupied by a two-storey Crosby Volkswagen car dealership and a garage, used as auto repair and service shop. The main entry and exit points to the Site are currently from Weber Street E, with parking along the perimeter of the property as well as behind the Volkswagen showroom. The west side of the Site, at the corner of Franklin Street N and Weber Street E, is mainly used for storing used cars. The existing building is proposed to be removed to facilitate the proposed development.

### 2.3 Existing Vegetation and Topography

The Site is generally flat with vegetation limited to the perimeter of the Site, recognizing the extent of the building footprints, surface parking area and driveway. However, there is a significant, abrupt grade change located along the southern property boundary with Highway 8 situated approximately 6 metres lower than the Site.



Study Area



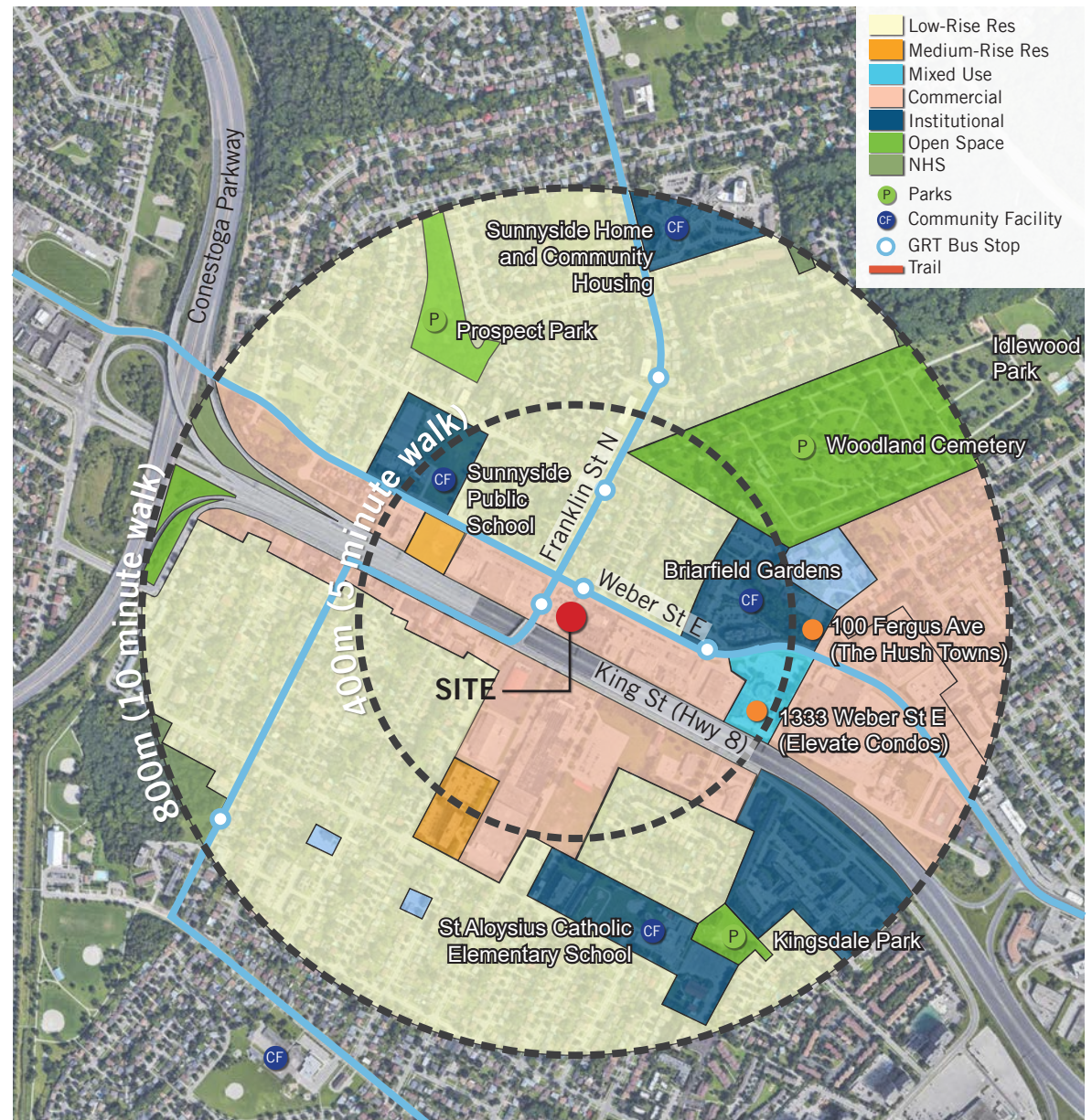
### 3. NEIGHBOURHOOD CONTEXT AND CHARACTER ANALYSIS

#### 3.1 Surrounding Neighbourhood Context

The Site is located within the Stanley Park neighbourhood which is composed of a variety of land uses such as commercial/retail buildings, recreational facilities, schools, and low-rise residential buildings. The Site is within 10-minute walking distance (800 metres) of a few parks and open spaces and school grounds including Woodland Cemetery, Prospect Park, and Kingsdale Park as well as Sunnyside Public School and St Aloysius Catholic Elementary School. The Site is along two existing transit service routes, with access to two GRT transit routes (8,28) connecting to ION Light Rail Transit.

The Site is located immediately adjacent to Weber Street and Fergus Avenue Community Node, which is currently undergoing residential intensification, and planned for medium to high density uses. The current redevelopment occurring at 100 Fergus Avenue (The Hush Towns) and 1333 Weber Street E (Elevate Condos) are medium to high-density developments, which are approximately 350 metres east of the Site. They are 15-storey mixed-use residential dwelling and two-storey townhouse development. While broadening the mix and density of residential uses, these new developments are well supported by existing infrastructures and community and public services, and active transportation options.

Low-rise residential uses are located beyond the commercial strip that frames Weber Street, to the north. The prevailing building types are one or two-storeys detached dwellings and interspersed apartments that



Surrounding context to the Site

are no higher than four storeys (along Prospect Avenue, Franklin Street and Fergus Avenue). The detached buildings have varied front entrances (small porch with canopy and wraparound porch) well integrated into the front yard landscaping and, appropriately sized windows facing the adjacent streets. Front yards are generously planted with grass lawns and hedges with driveways generally along the side of lots. The common building materials generally include brick and siding with stone accents along the base of the buildings with a mix of colours in the area adding to the variety and visual interest, though they generally draw from a similar palette of grey, beige, and brown tones with white accents (window frames, front porch railings).

Streets within the neighbourhood have narrow rights-of-way with sidewalks on both sides, mature trees along boulevards, and linear streets with consistent building setbacks. The buildings have either hipped or gabled roofs in this area. Woodland Cemetery (north of the Site) is a large open space, measuring 20 hectares (50 acres) in area, located at the terminus of Arlington Boulevard, just off Weber Street.



## 3.2 Immediate Context



**North:** The Site fronts Weber Street E, a four-lane regional road with two lanes of traffic on each side with a left turning onto Franklin Street and sidewalks on both sides. Directly across Weber Street East are three detached dwellings (along Franklin Street and Pinecrest Drive) with driveways accessed by Weber Street East.



**East:** The abutting property to the east (1191 Weber Street East) is a one-storey automotive service shop (Mr. Lube) and a garage at the back with parking along the west side of the shared property line. Further east, there is a Shopper's Drug Mart, gas station and commercial building featuring retail shops and office, located directly behind the gas station.



**South:** Provincial Highway 8 is located immediately to the rear of the property. The existing cross section of Highway 8 is an eight-lane controlled access highway with four lanes of traffic on each side. There are two retaining walls on both sides of the road and an overpass for Franklin Street.



**West:** The property to the west of the Franklin Street N is a grocery store ("Fresh Co.") surrounded by surface parking. The property is currently accessed by Franklin Street N and Weber Street E. Further west of grocery store, there are few retail shops and a six-storey apartment building.



## 4. DESIGN POLICY AND GUIDELINES REFERENCES

This section contains a summary of the design policies and guidelines relevant to the Site and proposed development and assessment of the general themes of those documents.

### 4.1 Official Plan

#### Designation Design Policies

The Site is located within an “Urban Corridor” in Map 2 (Urban Structure) of the City of Kitchener Official Plan and is designated “Commercial” in Map 3 (Land Use). Sections 3.C.2.37-39 of the OP state that Urban Corridors are located along existing or planned transit corridors and should provide for transit-supportive intensification opportunities. The Commercial land use designation (Section 15.D.5) includes the objective of encouraging the intensification and redevelopment of existing commercial lands. In addition to commercial uses permitted in this designation, Policy 15.D.5.17.b) states that lands identified as Urban Corridor “may include dwelling units, where appropriate, provided that they are located in the same building as compatible commercial uses and are not located on the ground floor to a maximum Floor Space Ratio of 2.0”.

To permit high-density residential and commercial development on the property in the future, applications for Official Plan and Zoning Amendments are required.

The proposed Official Plan Amendment would change the land use designation from “Commercial” to “Mixed Use”. This would facilitate the development of a higher density project that includes residential and commercial components. The “Mixed Use” designation would better support the aforementioned objectives for the “Urban Corridor” designation, enabling the Site to accommodate a larger number of residential units than the Commercial designation would allow.

The Site is currently zoned “Arterial Commercial” (C6) in Zoning By-law 85-1. The proposed Zoning By-law Amendment would change the Site

from C6 to “High Intensity Mixed Use Corridor” (MU-3). The MU-3 zone would better support the requested “Mixed Use” land use designation by allowing for residential uses and a maximum Floor Space Ratio of 4.0.

### 4.2 General Urban Design Policies

Section 11 of the Official Plan contains general urban design policies that are used to evaluate movement patterns, the relationship between built form and open spaces, integration of natural and cultural resources and development impacts. They include:

- General urban design policies that speak to the city’s skyline, CPTED principles, fire prevention, barrier-free accessibility, and shade.
- Site Design policies speak to the building’s street relationship landscaping to improve the streetscape; developments to improve aesthetic quality and be safe, comfortable, functional and provide circulation for all transportation modes; and Site servicing and utilities to be screened from view from the public realm.
- Building Design, Massing and Scale design policies speak to human-scale proportions to support a comfortable and attractive public realm, including attractive building forms, facades, and roof designs; complementary design of new buildings; and architectural innovation and expression.

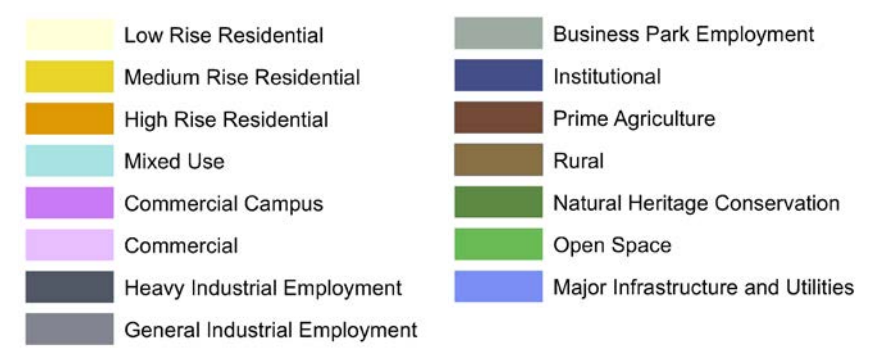
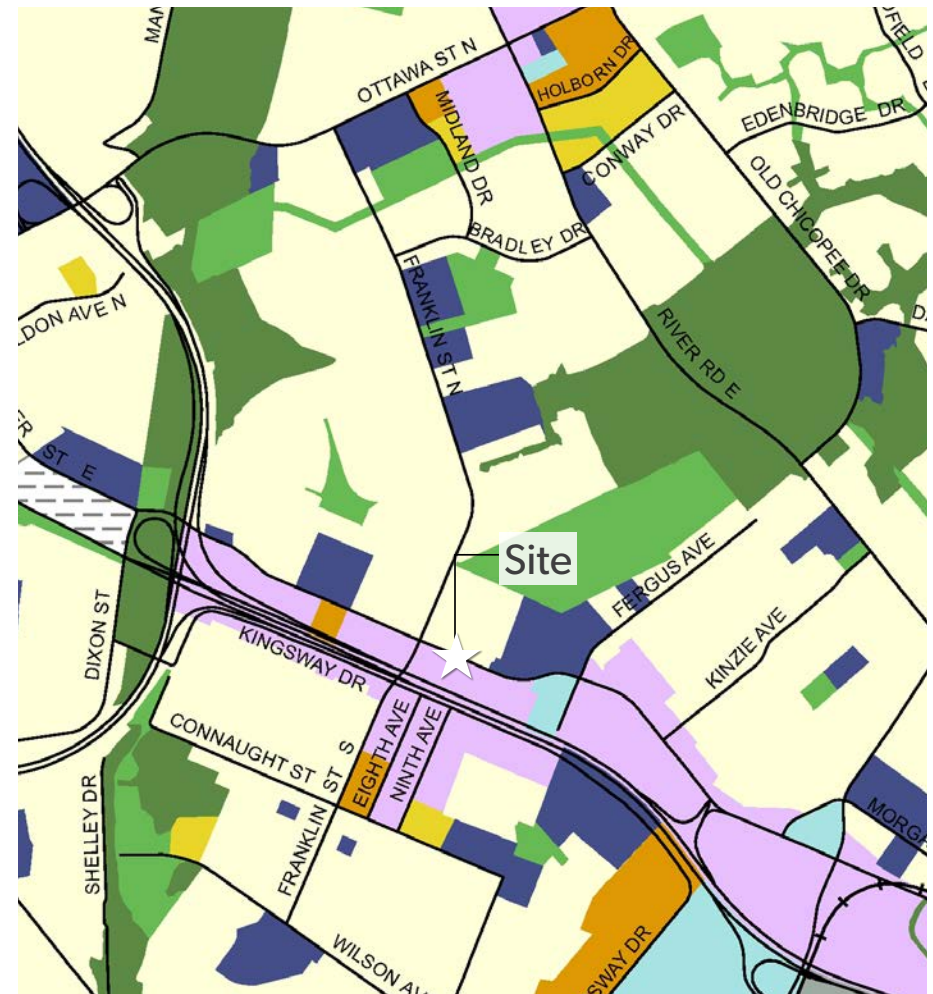
Section 17.E.10.5 identifies that urban design briefs/reports together with other design-related are meant to be used to

- a) demonstrate that a proposed development or redevelopment is compatible;
- b) address the relationship to and the privacy of adjacent residential development; and,
- c) ensure compatibility with the existing built form and the physical character of the established area and/or neighbourhood.

Urban Structure (Map 2) in City of Kitchener Official Plan



Land Use Plan (Map 3) in City of Kitchener Official Plan





## 4.3 Urban Design Manual

### PART A – Design Guidelines

Part A contains design guidelines on various land uses, built types, geographic areas, and urban structure elements. The following topics of design guidelines are relevant to the Site and the proposed building.

#### a) City-Wide

The City-Wide design guidelines apply to Kitchener as a whole. The main objective of these guidelines is to ensure Kitchener is designed as an inclusive, safe, accessible, comfortable, and appealing place to live, work and play. Guidelines are divided into Community Design and Site Design. The Community Design guidelines are primarily used by the City in designing the form and structure of communities through the application of design best practices in a range of topics. The Site Design guidelines address built form, open space and Site functionality.

#### b) Structured Parking

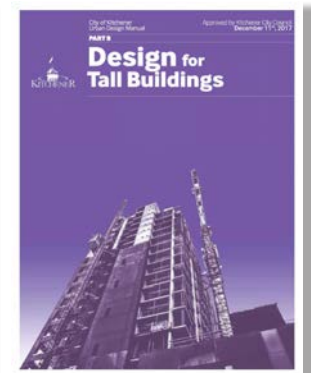
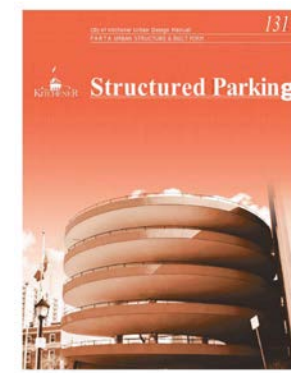
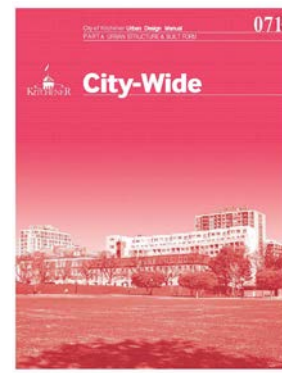
The Structured Parking guidelines guide the design of above-ground parking structures, whether integrated parking garages as part of a building or stand-alone parking garages.

#### c) Tall Buildings

The Tall Buildings guidelines guide the design of tall buildings in the city, which are defined as those greater than 8 storeys in height. These guidelines are meant to be read in conjunction with the policies of the Official Plan and guidelines of the Urban Design Manual and are meant to be applied on a case-by-case basis.

### PART C – Design Standards

Part C contains design standards with specifications on technical details. Several standards are applicable to the proposed development, including those for access to roads, surface parking, outdoor lighting, barrier-free accessibility, pedestrian and transit supportive development, screening of rooftop mechanical equipment, emergency services, multiple residential, landscaping and natural features, and landscape design. These technical aspects of the detailed design will be evaluated at a later stage of the review process through Site Plan Approval.



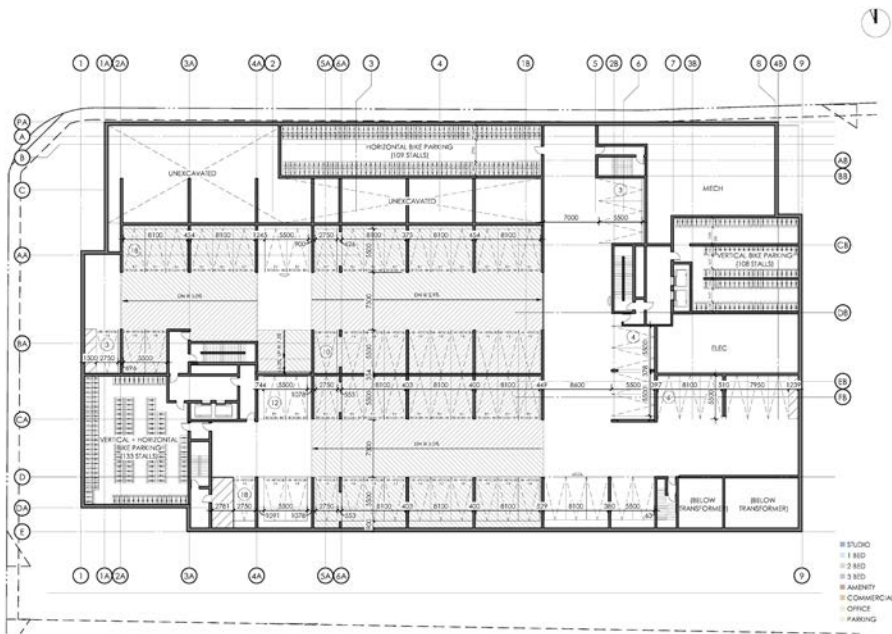
## 5. PROPOSED DEVELOPMENT

### 5.0 Development Overview

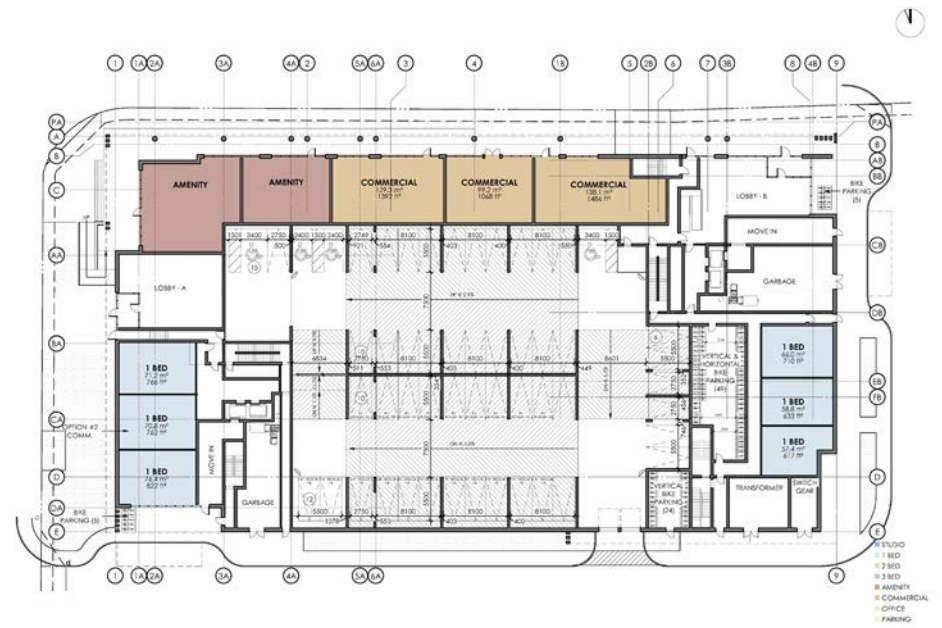
The proposed development is a mixed-use development comprised of two residential towers, Tower A and B at 19- and 17-storeys with a combined total of 443 dwelling units sitting atop a 4-storey podium. It will have metric building heights of 67.4 metres (Tower 'A') and 61metres (Tower 'B') above the established grade (including the mechanical penthouses). The proposed building incorporates approximately 366 square metres of commercial spaces at ground level fronting Weber Street. A total of 319 parking spaces will be provided within one level of underground parking and four levels of the above-grade parking structure – which is integrated into the podium of the building at the rear. Indoor amenity space, retail space, and residential units will wrap around the integrated parking, concealing its visual presence along Franklin Street N and Weber Street E frontages.



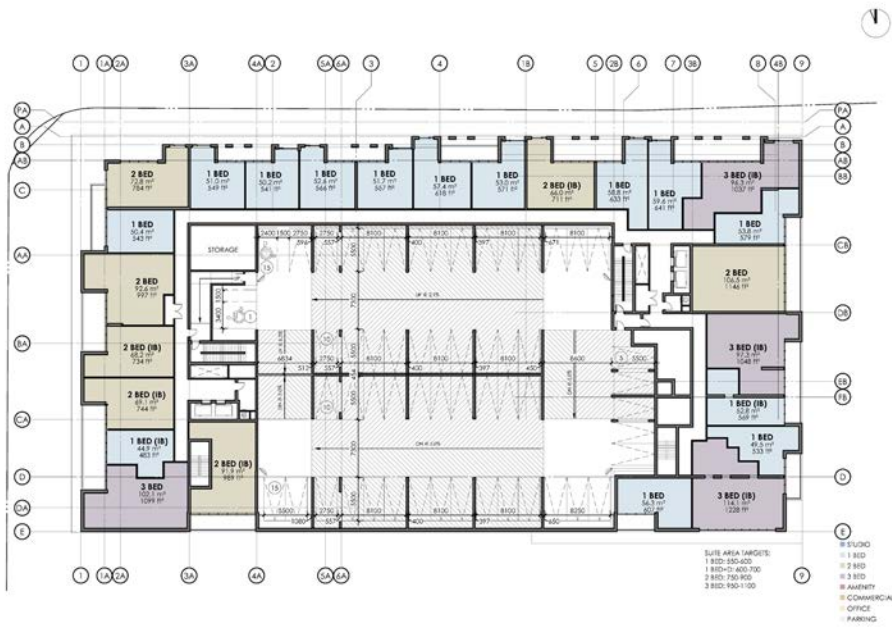




Underground Floor Plan



Ground Floor Plan



Level 2-3

Floor Plans, prepared by ABA Architects





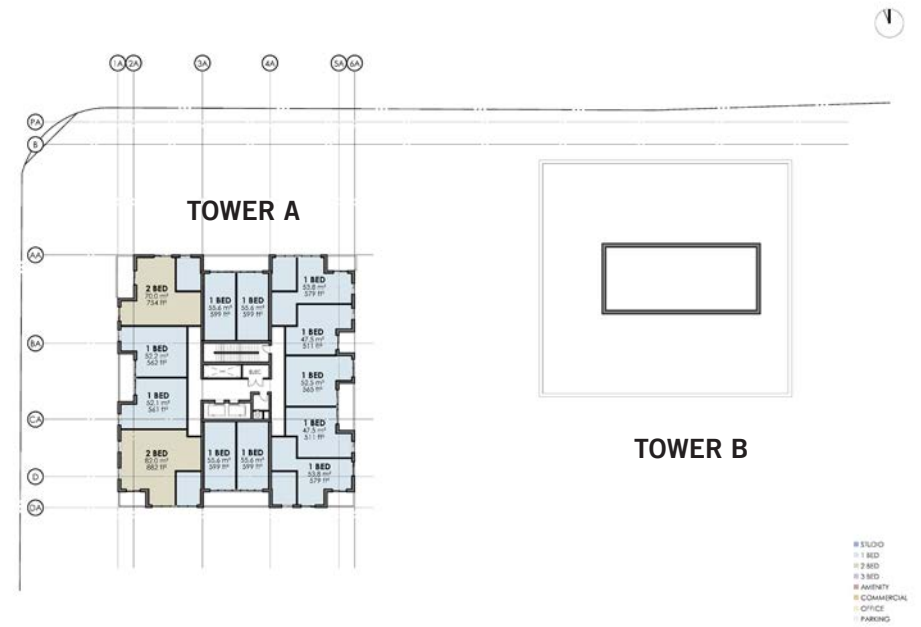
Level 4



Level 5 - Rooftop Terrace Plan



Level 6 - 17



Level 8 - 19

## 5.1 Building Positioning

The proposed building encompasses the majority of the Franklin Street N and Weber Street E frontages of the Site. The building's podium is massed with 3.5 metres setback to the Weber Street edge, and 9.2 metres from the Franklin Street N property line. The building's podium is setback 28.3 metres from the south property line away from Provincial Highway 8 and 22.7 metres from the east property line. At ground level, the lobby, commercial space and amenity areas front onto Weber Street E, while residential units and other services face the internal driveway. The presence of active uses along both street frontages will help animate and improve the existing public realm. The Tower 'A' residential entrance and amenity space fronts the intersection of Franklin Street N and Weber Street E to reinforce the corner and allows for prominent visibility from the public sidewalk along each street frontage.

The proposed development includes two residential towers ('A' and 'B') positioned at opposite corners of the podium base, providing an offset in spacing between the two, with the 19-storey Tower 'A' positioned at the southwest corner and the 17-storey Tower 'B' positioned at the northeast corner. The two towers are appropriately separated and situated at either end of the building base on Weber Street for enhanced residential unit privacy and increased sky view and sunlight access. Tower 'A' is setback 12.2 metres from the west property line (abutting Franklin Street N right-of-way) and 28.3 metres from the south property line (abutting the Provincial Highway 8), and Tower 'B' is setback 6.5 metres from the north property line (abutting Weber Street E right-of-way) and 25.7 metres from the east property line (abutting the non-residential uses) to provide appropriate separation distances from adjacent developments.

Vehicular access to parking, loading and servicing is situated at the rear of the proposed building. It is located at the rear to minimize its visual presence from the Franklin Street N and Weber Street E public realm and improve the overall pedestrian experience around the Site.





## 5.2 Building Scale and Massing

The proposed development is defined as a tall building(s) as it proposes building heights 18- and 15-storeys (Towers 'A' and 'B'). These heights correspond with the emerging trend of taller building forms being planned along Weber Street E. The proposal incorporates tower setbacks above the 4-storey building base (14.5 metres podium height) to reinforce the podium as the defining element for the public realm along each street frontage and limit the visual impact of the towers at grade. Appropriate side yard building setbacks are incorporated to ensure suitable separation distances are provided between the proposal and future potential developments.

The proposed mixed-use building has a building footprint of approximately 4,332.6 square metres, measuring 91.3 metres along Weber Street E and 50 metres along Franklin Street N. The proposed development is comprised of a well-defined base (podium), middle section, and top (uppermost storeys and rooftop mechanical). The 4-storey mixed-use podium consists of at-grade commercial space, measuring 844.3 square metres in area at 4.5 metres floor-to-ceiling height. The podium's ground floor along Franklin Street N and Weber Street E is continuously lined with commercial units, with direct access to the sidewalks.

The residential entrances are located on the northeast and southwest corners of the building and are clearly differentiated from the commercial entrances through architectural details such as recessed entrances, double doors, and windscreens. Steps and ramps are architecturally integrated with the commercial facade at the corner of Weber Street E and Franklin Street N to accommodate the grade change along Weber Street E.

The towers ('A' and 'B') positioned atop the 4-storey podium are staggered and stepped back 3 metres, including balconies from Franklin Street N and Weber Street E. Tower 'A' at 18-storeys measures 59.7 metres in height and Tower 'B' is 35.6 metres in height. They are large point towers with 866-square metre floorplates. The longer side of the towers ('A' and 'B') is 32 metres, oriented toward the streets with 23.3 metres of tower separation between the two towers.

Preliminary floor plans show individual unit balconies for both podium and towers. Inset balconies are proposed for the building's podium and towers except for the corners of the towers where the facade steps to aid in mitigation measures. The building has at-grade amenity area (on the southeast side) and a communal rooftop terrace on top of the five-storey podium. The top of the towers are defined with mechanical penthouses, stepped back again from the edges of the buildings.





## 5.3 Parking

The proposed development consists of 319 parking spaces on one level of underground parking and four levels of podium parking, and 22 surface parking spaces inclusive of barrier-free spaces provided near the main residential entrances and 38 additional parking spaces provided within the MTO. Within the parking structures, there are secure bicycle storage rooms and lockers room for the building's occupants.

There will be 433 long-term bicycle parking spaces provided in a secure indoor bicycle storage room located in the ground floor and underground parking garage and ten bicycle short-term bicycle racks will be provided near the building's entrance for convenience use by visitors.

## 5.4 Access and Circulation

Pedestrian circulation will primarily occur on public sidewalks that abut the Subject Site along Franklin Street N and Weber Street E. Commercial entrances and indoor amenity spaces are provided along Weber Street E frontages, with indoor amenity spaces wrapping the corners of these two streets. A small forecourt is incorporated at the corner of Franklin Street N and Weber Street E to enhance the entrance, provide connections with the public sidewalks and serve as an unstructured open space. The residential entrances are located on the northeast and northwest corners of the building. Additional pathways from the public sidewalk to the building face are provided, allowing for direct access to the at-grade indoor amenity space, commercial space, and exit stairs. Barrier-free pedestrian walkways are proposed to provide access to the building entrances.

Vehicular access to parking, loading and servicing is provided from the north of Weber Street E, and the other from the west of Franklin Street N. These two accesses provide for vehicular and emergency service circulation through the Site. A loading (e.g. residential moving trucks) and garbage collection are provided near the residential entrances, facing the internal driveway. Access to the structured parking for the building is located on the south side, rear of the property. Surface parking is provided along the perimeter of the Site on the east and south sides.

## 5.5 Service and Loading Areas

Loading and servicing facilities – such as the garbage and waste rooms have been internalized and integrated into the ground floor of podium away from public realm. Mechanical equipment and utility rooms are incorporated into the parking garage levels and rooftop spaces.



Parking, Loading and Servicing





## 5.6 Building Articulation

The intended architectural design proposes a clean, contemporary look for the building. The placement of buildings in the proposed development is carefully considered for appropriate orientation and distances with respect to other buildings on the Site and on adjacent sites. The proposed development massing and design is intended to define the surrounding public realm and establish a sense of enclosure along public sidewalks by virtue of building heights related to the width of surrounding streets. Street edges on the Site are defined through use of street-oriented building base with grade level windows as well as commercial, indoor amenity and residential entrances that allow interaction between the public realm and activities within proposed buildings.

The 4-storey building base (podium) will be articulated along both street frontages to break up the perceived length and mass of the podium. This will be demonstrated through material selection and detailed design during the Site Plan Application process. The intent design will include extensive glazing along all building elevations, with a particular emphasis on the ground floor plane to activate the street and provide visual interest. Tall, glazed screens will be used all around the commercial spaces to maximize daylight, views in and out and to create active frontages. The commercial entrances will have a direct and universal access, while the residential entrances will have a significant entrance overhang as well as a feature wind screen.

The commercial entrances will feature enhanced architectural designs such as highly transparent windows and a canopied entrance supported by a signage with decorative pavement and planters integrated within the corner entryway. Weather protection for pedestrians will be provided at points of entry to the residential lobbies, commercial and indoor amenity spaces at-grade with projected canopies, framing the streets and public realm interface. The building's podium corner addressing both the streets, pulls back from the ground floor and will be architecturally detailed with window wall panels and balconies. Decorative paving materials will be

considered along the street-facing building edges to clearly distinguish between private and public realm. Further materiality will be conveyed in the detailed design during the Site Plan Application Process.

The upper portions of the building are clearly distinguished from the building base through the use of stepbacks. There are no blank facades; all elevations are detailed with glazing and articulation. Further articulation will be provided through variations in materiality and texture through detailed design during the Site Plan Application process. Balconies are architecturally integrated into the massing to minimize the perceived bulk of the building. Recessed balconies are proposed for all units in the building for both podium and towers and balconies wrap around the building corners. There are comparatively fewer balconies provided rear of the building's podium (south side), facing the internal driveway and Provincial Highway 8.

The top portion of the towers are defined with a mechanical penthouse, stepped back again from the edges of the building.

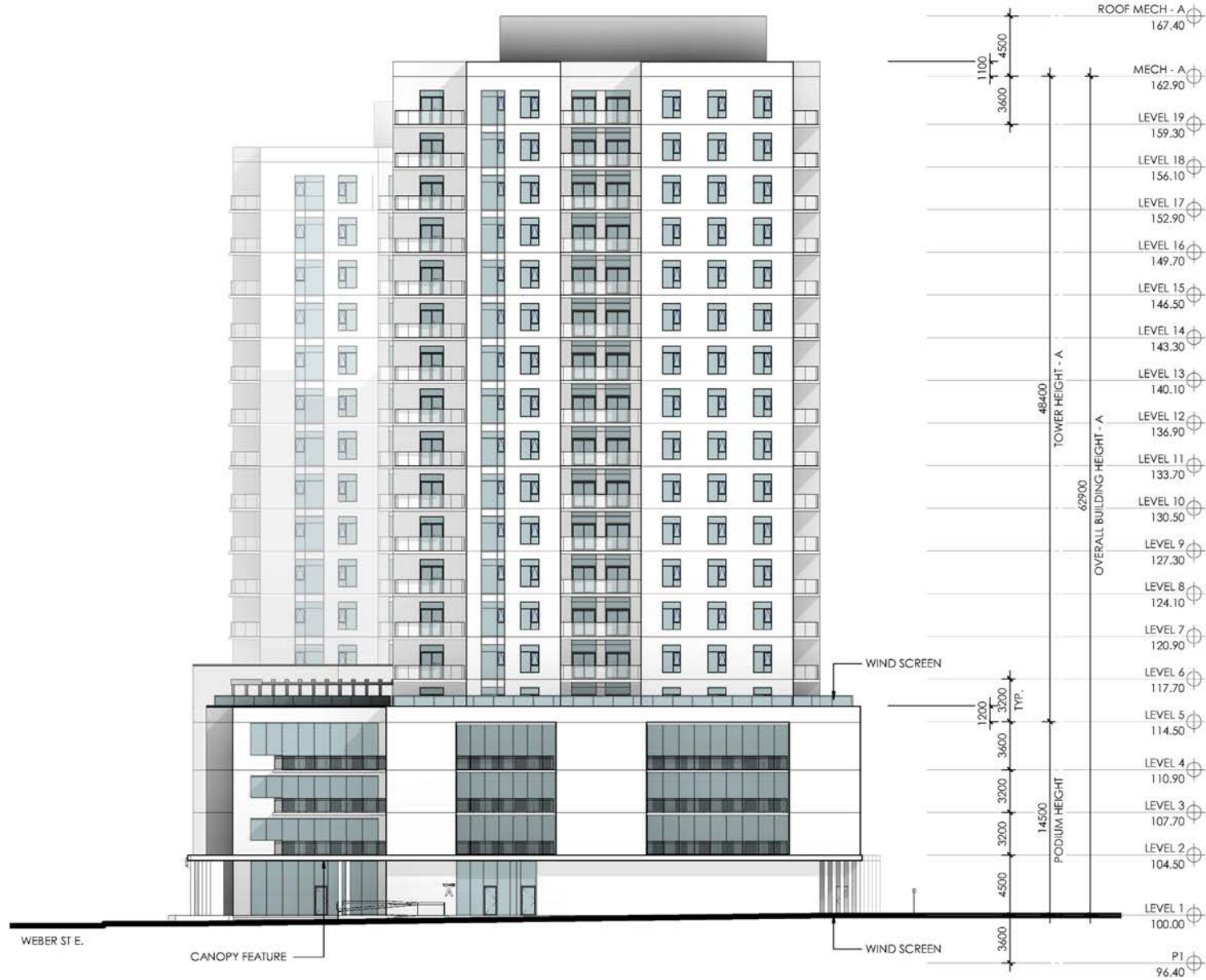




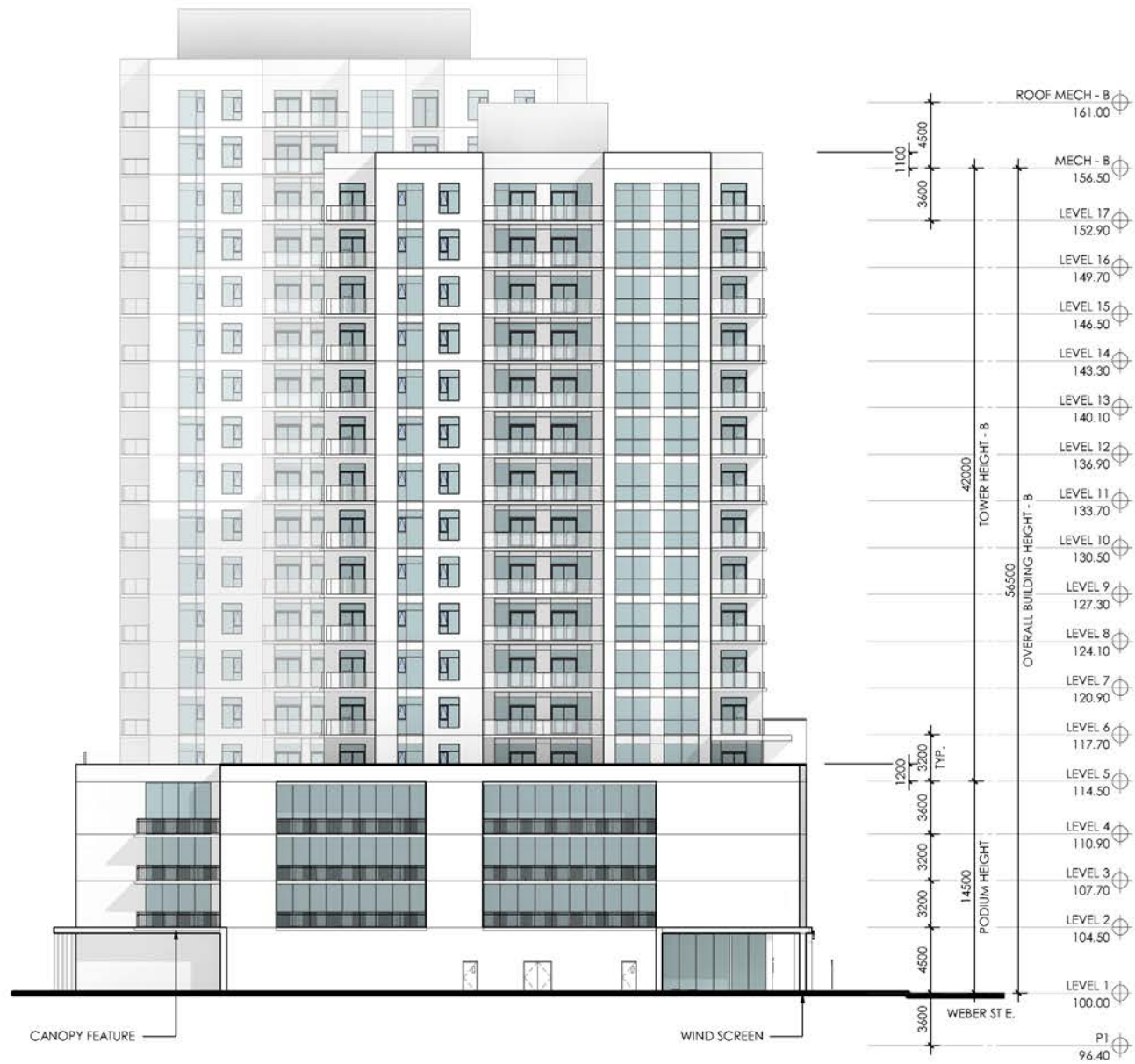
North Elevation, prepared by ABA Architects







West Elevation, prepared by ABA Architects



East Elevation, prepared by ABA Architects



## 5.7 Streetscape and Landscape Design

The ground floor of the 4-storey building base setbacks 5.65 metres and 9.2 metres from the street-facing property lines at Franklin Street N and Weber Street E to the building's edges. This intervening area provides opportunities for comprehensive landscape treatments that contribute to the visual aesthetics and quality of the public realm. The preliminary landscape concept plan proposes landscaped lawns between the building and the streets.

The ground level of the proposed development has been designed to generate pedestrian activity and revitalize the streetscape by providing ground-level commercial uses and amenity areas. The building design will provide enhanced streetscape design that will include pedestrian protection from weather elements through extended overhead canopies at grade, strategically placed and designed; barrier-free pedestrian paving design accessing building entrances and a variety of plantings to provide year-round visual interest across the Site to further enhance the pedestrian experience. In addition, there will be a high concentration of windows and entrances along both the Franklin Street N and Weber Street E streetscape to further activate the street and provide visual interest. Decorative paving materials are proposed along the building edges to create a unique pedestrian experience on-site and in addition, will assist with the reduction of heat islands. The use of distinctive coloured and textured paved materials will also ensure a seamless transition from the public to the private realm, allowing for barrier-free movement, where feasible, across the Site.

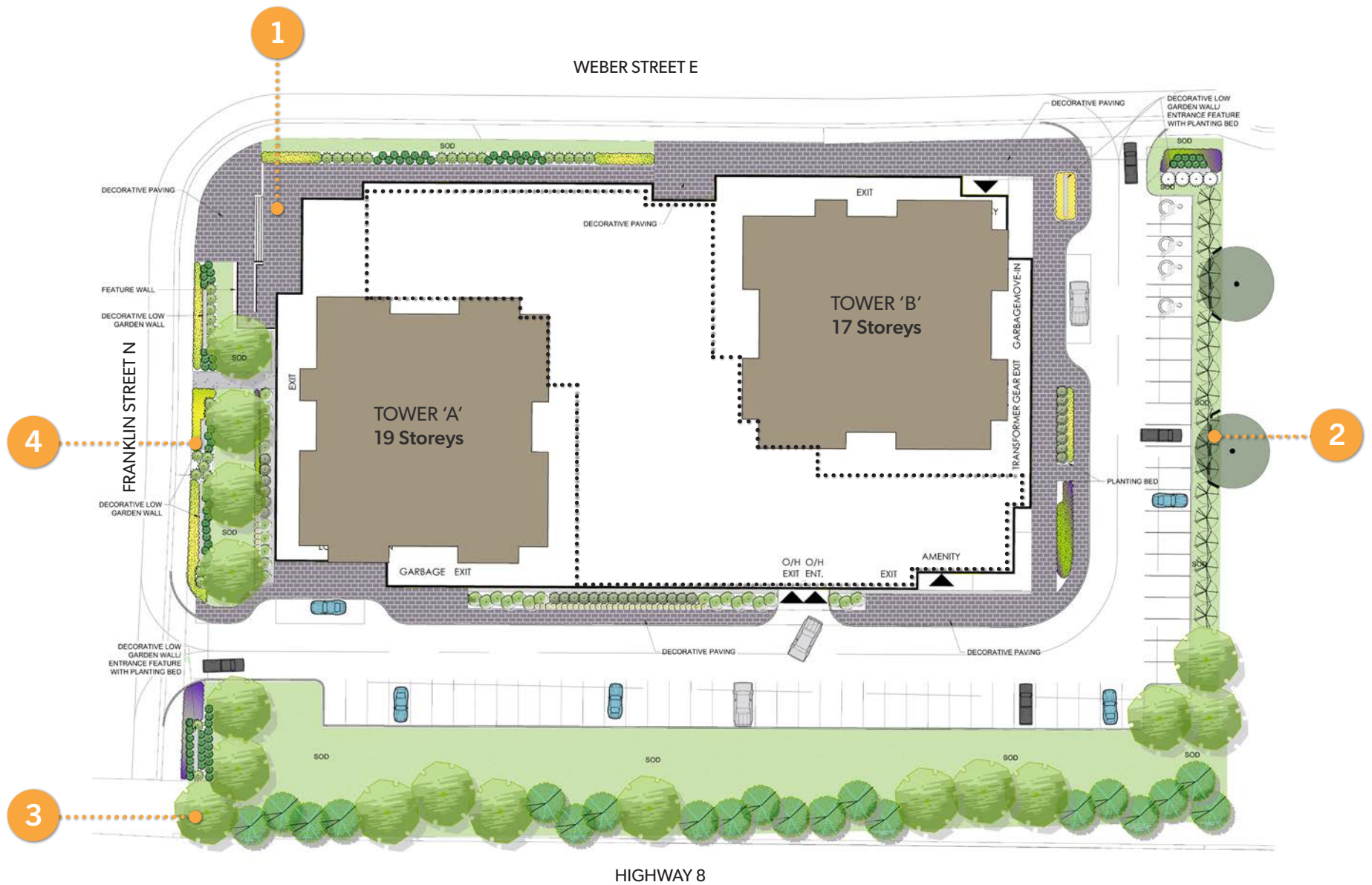
Tree plantings and massed understory plantings, where possible, will be proposed along Franklin Street N and Weber Street E frontages and throughout the surface parking lot to break up the surface parking area and reinforce the pedestrian walkways. Peripheral landscaping and tree plantings will be included to frame the streets, soften the edges of buildings, and screen undesirable views such as surface parking areas. Barrier-free pedestrian walkways are proposed throughout the Site, linking to the public sidewalks.

### Amenity Areas

The development includes indoor amenity spaces located on the ground floor and fifth floor with a combined total of 1,223.6 square metres of common amenity areas. These areas will function as multi-use common areas that can be programmed for different events/functions. Indoor amenity areas featuring a fitness room and a party room are proposed on the ground floor with frontages along Franklin Street N and Weber Street E. This space is intended to be highly visible and transparent in order to provide animation along the adjacent public realms.

The proposed design of the rooftop terrace has a combination of outdoor programmed areas with an indoor amenity space located between the two towers, providing opportunities for different amenities and recreation functions. The rooftop design will predominantly be a hard-surfaced space for durability, and ease of maintenance. Soft landscape treatments such as raised massed planting beds with small canopy trees/shrubs, a children's play area, a pet relief area, and different types of seating arrangements through moveable furnishings and shade structures are proposed to accommodate various group sizes, featuring fireplace features. The children's play area will be designed as part of the rooftop terrace design, in keeping with the intent of Section 12 of UDM for both size and design. This play space proposes a moderately sized structure that can act as a play element and visual interest piece for rooftop users along with uniquely shaped seating elements that can double as play elements for children.

In addition, each dwelling unit will have access to private outdoor amenity space in form of a balcony. These balconies are further proposed to provide for varying depths, accommodating a variety of programming and use.



- Landscape Lawns
- Shrubs/Perennial Planting
- Decorative Pavers
- Street Trees/ Tree Plantings
- Outdoor Rooftop Amenity

Preliminary Landscape Concept Plan, prepared by GSP Group



1 Decorative Pavers



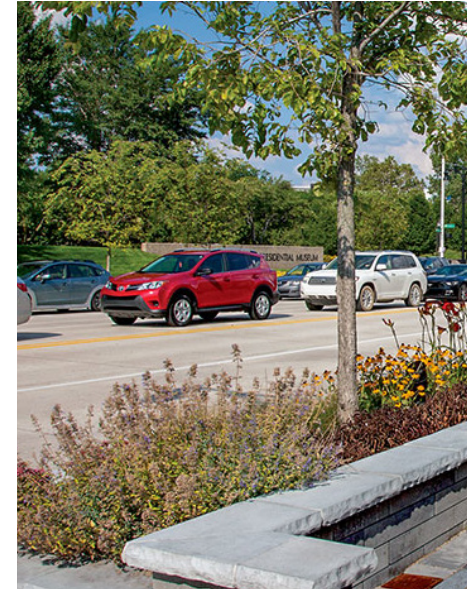
2 A palette of native small trees and shrubs along site edges



3 A tapestry of low shrubs, perennials and grasses to add texture and seasonal interest to the ground plane



4 Decorative Low Garden Wall with Understory Plantings



Precedent Images of Landscape Design Elements





*Representative example of Rooftop Play Area*



*Representative example of Rooftop Play Area*



*Representative example of Pet Relief Area*

## Precedent Images of Outdoor Rooftop Amenities





*Representative example of Podium furnishings to support passive/social recreation*



*Representative example of Raised Planters Beds*



*Representative example of Raised Planters Beds with Shade Structure and Seating Areas*

## Precedent Images of Outdoor Rooftop Amenities



## 5.8 Microclimate Analysis

### 5.8.1 Shadow Analysis

An updated Shadow Analysis based on the Revised Development Plan has been prepared for this submission. The Revised Development Plan maintains the general building placement and site configurations as originally proposed. The revisions principally relate to the podium height reduced to 4-storeys from the originally proposed 5-storeys, representing a podium height of 14.5 metres (previously at 17.7 metres), and Tower 'A' at 19-storeys and Tower 'B' at 17-storeys.

Shadow impact graphics are provided in Appendix A for March 21, June 21, September 21 and December 21 at 2-hour intervals between sunrise and sunset, as well as noon. The graphics illustrates two colours to quantify potential shadowing impacts:

- Yellow: illustrates the shadow overlap between those cast by the proposed building form and those by the existing buildings (i.e. not new net shadows).
- Orange: illustrates the previous net shadows by the previous version of proposed development.
- Blue: illustrates the additional net shadows by the revised version of proposed development.
- Red: illustrates the shadows removed by the revised version of proposed development (due to reduced podium height).

Analysis of these shadow impact graphics demonstrates the impacts are acceptable and provide sufficient sun exposure to affected properties. This is particularly recognizing limited use of outdoor space in December; higher use periods of June and September have significant continuous periods of no impact from the proposed building. Mitigation measures of step backs and location of the proposed development on the Site have been implemented to reduce impact along public streets and abutting properties.

Summarizing the graphics, the proposed building:

- Maintains more than 4 hours of sunlight on abutting properties.
- Weber Street Sidewalk: The proposed building's shadows generally do not affect the north side sidewalk on Weber Street receiving 3-4 hours of sun during any season (the cast shadows do not cross the Weber Street centerline in the summer).
- Franklin Street Sidewalk: The proposed building's shadows generally do not affect the north side sidewalk on Weber Street receiving more than 6 hours of sun during any season.
- Rooftop terraces: the proposed rooftop terrace receives a combination of full and partial sun from 10am to 4pm in the summer, and from 12pm to 4pm in the Fall.

Similar to the original development plan, the Revised Development Plan meets the guidelines set for shadow impact analysis per the City's standards on nearby established residential neighbourhoods and the public realm.

## Shadow Analysis of Abutting Properties

Building Impacts On	Weber Street E Sidewalk (north)	Commercial Property (east)	Provincial Highway 8 (south)	Franklin Street N (west)
<b>March 21</b>	Opposite - No impacts from 10am to 12pm; partially shaded between 2pm to 4pm Adjacent - Partially shaded from 10am to 4pm	No impacts from 10am to 4pm (6+ hours)	No impacts	Opposite - No impacts generally from 2pm to 6pm; partially shaded from 10am to 12pm (6+ hours) Adjacent - No impacts generally from 2pm to 6pm; partially shaded from 10am - 12pm
<b>June 21</b>	Opposite - No impacts from 10am to 6pm Adjacent - No impacts at 10am; partially shaded from 2pm to 4pm	No impacts from 10am to 4pm (6+ hours)	No impacts	Opposite - No impacts generally from 12pm to 6pm; partially shaded at 10am (6+ hours) Adjacent - No impacts generally from 2pm to 6pm; partially shaded from 10 am and 12pm (6+ hours)
<b>September 21</b>	Opposite - No impacts between 10am to 12pm; partially shaded from 2pm to 4pm Adjacent - Partially shaded from 10am to 4pm	No impacts from 10am to 4pm (6+ hours)	No impacts	Opposite - No impacts generally from 12pm to 2pm; partially shaded at 10am Adjacent - Partially shaded from 10 am and 2pm
<b>December 21</b>	Opposite - Partially shaded from 10am to 2pm Adjacent - Shaded from 10am to 2pm	No impacts from 10am to 2pm	No impacts	No impacts at 10am; partially shaded from 12pm to 2pm

### 5.8.2 Pedestrian Wind Analysis

An updated Pedestrian Wind Assessment (“Wind Assessment”), dated January 18, 2023, was completed by RWDI to conduct a desktop analysis to identify potential wind conditions and impacts as a result of the Proposed Development.

Generally, it concludes that the future wind conditions at-grade within and surrounding the proposed development are generally expected to be suitable for the intended usage year-round in the proposed configuration. Higher than desired wind conditions are expected near most entrances based on the Revised Development Plan.

Additionally, the outdoor rooftop amenity area on top of the 4th floor is expected to be windier than desired in some areas, for which mitigation is recommended. Satisfactory wind speeds can be achieved through architectural interventions such as tall vertical wind screens/planters and by providing compatible programming based on detailed wind analysis at the SPA stage.

Additional wind assessment such as a physical scale model test of the proposed development will be completed at the site plan application to inform detailed site design and amenity space programming.



## 6. RESPONSE TO POLICY AND GUIDELINE FRAMEWORK

This section contains a summary of the design policies and guidelines relevant to the Site and proposed development and assessment of the general themes of those documents.

### 6.1 Response to Official Plan Policy

The proposed design responds to the design direction of the Mixed Use designation in that the proposed Site:

- a) Aids in achieving appropriate mix of uses with a mix of commercial and residential units within the proposed development.
- b) Provides opportunity for residential intensification and the provision of a housing alternative, and is appropriately located at the corner of Weber Street E and Franklin Street N.
- c) Establishes street-oriented and pedestrian-friendly design, and contains ground floor commercial uses to support the public realm of Weber Street E.
- d) Enhances the existing character of the streetscapes along Weber Street E and Franklin Street N
- e) Is oriented to reinforce and animate the corner and provide a positive contribution to the public realm along both street edges.

The proposed development is designed in keeping with the General Urban Design policies in Section 11 of the Official Plan as it:

- Provides for “eyes on the street” and implements other CPTED measures;
- Makes a positive contribution to the skyline with articulated rooftop

designs with varying heights and setbacks;

- Provides access for emergency service vehicles;
- Is barrier-free accessible;
- Contributes to the variety of housing typologies in the local area;
- Is transit supportive;
- Includes amenity spaces suitable for all age groups;
- Supports walkability through siting, human scaled built form and animation with windows and recessed balconies along all building facades;
- Provides access for vehicles, pedestrians, and cyclists;
- Provides secure parking for both vehicles and bicycles;
- Screens parking and loading from the public realm;
- Garbage and recycling storage areas are located away from the building and public realm;
- Enhances streetscape conditions along both public frontages with street-oriented and human scaled built form; and
- Provides high quality building materials and architectural detailing on all elevations that complement surrounding buildings in the neighbourhood.

The proposed high-rise building is designed in keeping with the design policy direction of Official Plan Section 11, as further explored in detail as part of the Urban Design Manual analysis in the following section.

This Urban Design Brief, per Official Plan Section 17.E.10.5, demonstrates that the proposed development is compatible development with the surrounding area, as outlined below, and that there are minimal privacy impacts given there are no residential dwellings directly abutting the Site.

## 6.2 Response to Urban Design Manual Guidelines

### Inclusive Design

#### CITY-WIDE

#### TALL BUILDINGS

#### STRUCTURE PARKING

- Direct connections between the building interior and residential or commercial spaces and the abutting public sidewalks on Weber and Franklin.
- Pedestrian-scale lighting to be defined at detailed design stage and will ensure even illumination of exterior areas.
- Uninterrupted sight lines from the building faces to public sidewalks along Weber Street E and Franklin Street N, featuring a highly transparent building elevations at the ground floor and above for natural surveillance purposes.
- Ground floor commercial units fronting directly onto Weber Street E and Franklin Street N, animating the street with people and activity.
- Prominent, well-defined with built in canopy and signages to the main commercial units and residential lobby, which will be further defined with lighting and landscaping at the detailed design stage.
- Visitor parking and barrier-free parking is provided and clearly demarcated in locations near building entrances.
- A mix of different sizes of one-bedroom and two-bedroom units to provide flexibility of housing choice.
- Individual balconies are provided for all units and common outdoor rooftop terrace atop the 4th floor are designed to be suitable for all age groups.
- Continuous and unobstructed movement through the Site and through the building includes all vertical and horizontal areas that avoids any entrapment areas.
- Common outdoor rooftop terrace atop the 4th floor for use by all residents.

### Design for Sustainability

#### CITY-WIDE

#### TALL BUILDINGS

#### STRUCTURE PARKING

- Site is transit supportive and walkable and provides cycling infrastructure.
- Site is connected to employment, residential and institutional locations in the immediately surrounding area and throughout Kitchener.
- There are multiple active transportation connections in the vicinity with sidewalks and bicycle facilities.
- Indoor bicycle storage rooms and outdoor bicycle racks providing secure locations and supporting active transportation opportunities.
- Minimal surface parking with most parking in an underground parking garage, reducing associated heat island effects.
- High efficiency lighting and building components will be provided.
- Architectural features such as canopies and building overhangs shown on plans, while building envelope considerations such as increased insulation, high-performance glazing and lower window-to-wall ratio to be explored through detailed design.
- Material choice and detailing addresses bird collision avoidance guidelines, which can be further explored through detailed design.
- On-site facilities are provided for handling, storing and separating recyclable and solid waste, and an area inside each building will have facilities for the collection of organic materials.

### Design of Outdoor Comfort

#### CITY-WIDE

#### TALL BUILDINGS

#### STRUCTURE PARKING

- The Pedestrian Wind Assessment demonstrates acceptable safety and comfort conditions around building entrances, on sidewalks, and on surrounding commercial properties.
- The Shadow Analysis demonstrates acceptable sun exposure

conditions for affected sidewalks, public spaces, and adjacent low-rise properties.

- Delineated pedestrian pathways will be finished with a non-slip surface treatment and maintained to accommodate pedestrians during all weather conditions.
- Landscape plans at the time of detailed design to address planting opportunities for shading and wind screening, as needed.

## Street Design

### CITY-WIDE

- While no new streets are proposed as part of the proposed development, it meets the guidelines for street design as follows:
  - a) The ground floor of the building is 4.5 metres high with a continuous canopy lining the street-oriented frontages, helps provide definition and a sense of enclosure along both streets and adds prominence to the corner.
  - b) The proposed at-grade commercial uses will assist with creating vibrant streetscapes along Weber Street E and Franklin Street N; and
  - c) Where driveways for the proposed development intersect public sidewalks, the sidewalks will be demarcated in a different surface treatment and will maintain barrier-free accessible standards.

## Compatibility

### CITY-WIDE

### TALL BUILDINGS

### STRUCTURE PARKING

- The proposed development will maintain a continuous streetwall, and uninterrupted and barrier-free pedestrian movement along the proposed at-grade commercial uses.
- Human-scaled proportion is achieved by a four-storey podium with a ground floor height of 4.5 metres, highly transparent at-grade commercial activities, and prominent building entrances defined by canopies.

- The mixed-use building is sited and oriented to frame the streets corner with internal driveway and surface parking setback at 22.7 metres and 28.3 metres from the east and south sides of the property lines, respectively. This serves as a transition in scale to the abutting properties.
- Staggered tower heights and offset tower footprints will provide relief to the abutting streetscapes from a continuous tower mass above and will fit into the overall character and contribute to the harmony of the city skyline.
- Contemporary architectural style, detailing and materiality to be refined through the detailed design stage and will ensure colour and texture on the facades are consistent with and complement the surrounding context.
- The street facades of the building will include variety of materials and architectural detailing, adding interest to these streetscapes.
- Articulated elevations include balconies, high quality materials, fenestration, and architectural details that can not only co-exist, but also enhance the existing character of the streetscapes along Weber Street E and Franklin Street N.
- Siting of parking interior to the Site and below grade respects the streetscape and reduces visual impact to the public realm.
- As demonstrated in the Shadow Impact Analysis, the massing arrangement on the Site ensures adequate sunlight on neighbouring properties and the public realm.
- With the implementation of pedestrian-friendly streetscapes, high quality materials, fenestration and architectural details, the proposed development represents compatible residential intensification in an existing neighbourhood that makes efficient use of existing infrastructure and community services, is transit supportive and broadens the range of housing options and densities available within the community.



## Shared Spaces

### CITY-WIDE

### TALL BUILDINGS

### STRUCTURE PARKING

- A rooftop outdoor terrace atop the 4th storey and at-grade indoor amenity area will provide shared amenity space for residents.
- Balconies proposed for all units, provide natural surveillance of the shared outdoor amenity area in this location.
- The development incorporates a mix of individual balconies, indoor and outdoor amenity space to provide variety of recreation options and programming opportunities.
- Lighting for the Site will be considered at the detailed design stage but will ensure on-site lighting provides appropriate illumination of exterior areas while minimizing light trespass to surrounding properties.

## Site Function

### CITY-WIDE

### TALL BUILDINGS

### STRUCTURE PARKING

- Parking and structured parking entrances are located in the interior of the Site away from the street edges. There is no parking in the front yards.
- Vehicle circulation routes through the Site, including the emergency service routes and accesses to below grade parking are well defined.
- Bicycle parking is provided in the below grade parking structures. Some convenient bicycle parking racks will be near the principle building entrances.
- Barrier-free parking spaces are provided near principle building entrances.
- Increased visual connection into the building, as well as weather protection for pedestrians are provided at points of entry to the residential lobbies and commercial spaces at grade with a continuous canopy lining the pedestrian-oriented street wall frontages.

- Steps and ramps are integrated with the commercial facade , located on the northwest corner of the building.
- Detailed design of private on-site servicing, utilities and HVAC will be done at the detailed design stage and efforts will be made to minimize their visual impact.
- Garbage and recycling storage areas are sited interior to the Site and designed such that:
  - they do not negatively impact the streetscapes, amenity areas or building occupants;
  - they do not obstruct fire routes, parking or sidewalks;
  - they will be fully enclosed and screened from view from the public realm.

## Built Form

### CITY-WIDE

### TALL BUILDINGS

- The proposed buildings are oriented and positioned to respect the local context, including the interface with the low-rise residential neighbourhood to the north and non-residential uses to the east.
- The proposed building podium is sited and oriented to reinforce and animate the corner and maintains continuity along Weber and Franklin Street edges, occupying 82% of the Weber Street E frontage and 83% of the Franklin Street N frontage.
- The building has a well-defined base (podium), middle (tower) and top sections with significant step backs and varied tower heights to vertically break the overall massing.
- Architectural detailing, including balconies, projections, colours and materials are used on all building elevations which help reduce the apparent scale of the building.
- The regular spacing of balconies, windows and variation of building materials and articulated architectural projections create visual interest and reinforce human scale.
- Towers 'A' and 'B' positioned atop the podium are offset and have

varied heights (Tower 'A' at 19 storeys and Tower 'B' at 17 storeys) and steps back 3 metres to reduce the visual scale of the massing of the building from the pedestrian perspective, to limit overlook and shadow units below, and provide interest to building massing.

- Mechanical penthouse stepped back from all street edges, with further stepback to the top roofline.
- Core cladding materials includes clear glass and metal siding panels with other accenting materials throughout. Clear glass is predominant along the public facing elevations (south and east) interposed with tinted spandrel panels for accent effects.
- All elevations, including side elevations, have window openings and balconies; no blank facades.

## **Building Components (Ground Floor and Base Design)**

### **TALL BUILDINGS**

#### **STRUCTURE PARKING**

- The proposed massing of the mixed-use building has a strongly defined building base with high degree of glazing and multiple entrances along the street edges to encourage pedestrian interaction.
- The proposed ground floor has a 4.5 metres floor-to-ceiling height with at-grade commercial spaces measuring 366 square metres in area, with direct accesses to the sidewalks.
- Ground floor design “flows” from building interior to streetscape through coordinated surface treatment and continuous window treatment.
- The 4-storey pedestrian-scaled podium is distinguished by upper storey stepbacks and intended architectural treatment.
- While the building podium exceeds the recommended maximum length of 70 metres, it contains architectural detailing and articulation to break down its apparent length as perceived from Weber Street E.
- Weather protection for pedestrians is provided at points of entry to the residential lobbies and commercial spaces at-grade with a continuous canopy lining the pedestrian-oriented street wall frontages.

- Steps and ramps are architecturally integrated with the commercial facade at the corner of Weber Street E and Franklin Street N.
- Recessed entrances and wind screens are provided near the residential entrances to maintain privacy and wind comfort.
- An indoor at-grade amenity area for the residents is provided rear of the building.
- Siting of the buildings on the Site provide for screening of site functions such as loading, parking and garbage areas from the public realm.
- Balconies are provided for all residential units in the building on street facing and internal facing elevations for both podium and towers.
- The building’s podium at the corner addressing both streets, pulls back from the ground floor features enhanced architectural designs such as floor-to-ceiling window wall panels and balconies, which adds prominence to the intersection of Weber Street E and Franklin Street N.
- The mass of the buildings will be broken down both horizontally and vertically through changes in materials and architectural projections and articulation.

## **Building Components (Tower Design)**

### **TALL BUILDINGS**

#### **STRUCTURE PARKING**

- The proposed mixed-use building consists of two towers (Tower 'A' at 19 storeys and Tower 'B' at 17 storeys) positioned atop the 4-storey podium. Tower 'A' and Tower 'B' stepback 3 metres from the podium from Franklin Street N and Weber Street E, respectively to provide relief to the abutting streetscapes from a continuous tower mass above.
- Towers are categorized as “Large Point” towers with tower floorplates of 865.5 square metres and overall height of 62.9 metres for Tower 'A' and 42.0 metres for Tower B (excluding mechanical penthouses for both towers), per the Tall Building Guidelines. The Relative Height of Tower B is less than 85% and set back approximately 28.3 metres from the east property line (abutting the non-residential uses), which substantially satisfies the minimum in zoning requirement of 7.5 metres

rear yard per the current Zoning By-law. These siting and massing measures provide transition of built form and mitigate potential shadow/privacy impacts to neighbouring properties.

- Physical Separation between towers determined by building's height and tower length, are 11.12 metres for Tower 'A' and 9.82 metres for Tower 'B' with a combined total of 17.82 metres. The proposed building has provided 23.3 metres tower separations between the two towers and less than 30% overlook is achieved to provide privacy and views for building occupants and minimize wind and shadow effects.
- Balconies are proposed on all sides of the building. Inset balconies are provided to reduce the visual scale of the massing of the towers from the pedestrian perspective, limit overlook, and provide interest to building massing.
- The tower footprints are offset to increase perceived tower separation distances and to minimize overlap and to allow for adequate light, views, and privacy.
- Staggered tower heights at 19-and 17- storeys high for Tower 'A' and Tower 'B', respectively provide visual interest within the skyline.

## Building Components (Top Design)

### TALL BUILDINGS

#### STRUCTURE PARKING

- Narrow, linear enclosed rooftop mechanical penthouse on top of the two towers considerably stepback from the edges of the buildings, defining the rooflines.
- The tops of the two towers will be designed through their massing and through their materials to create a distinctive identity to the building.

## Building Components (Materials and Details)

### TALL BUILDINGS

#### STRUCTURE PARKING

- Detailed architectural plans and elevations have not been completed for the OPA/ZBA submission. The material palette for the proposed mixed-use building will predominantly consists of precast with window wall systems and assorted variations in glazing.

- A high degree of transparency is achieved by providing transparent windows and glazed balcony guards along all building elevations, with a particular emphasis on the ground floor plane and street elevations.
- Tall, glazed screens are used all around the commercial spaces to maximize daylight, views in and out and to create active frontages.
- Weather protection for pedestrians are provided at points of entry to the residential lobbies and commercial spaces at-grade with a continuous canopy lining the pedestrian-oriented street wall frontages.
- The residential entrances are clearly differentiated from the commercial entrances through architectural detail such as recessed entrances, double doors and wind screens for privacy from the abutting streetscapes.
- The change in materials distinguishes the building base and the upper storey to reduce the perception of mass.



## 7. SUMMARY

Based on the forgoing urban design merits, the Revised Development Plan conforms to the Urban Design policies of the Kitchener Official Plan and reflects the direction of the City's Urban Design Manual, particularly the guidelines for Tall Building Guidelines. It is an appropriate development for the context and reflects principles of good urban design.

The design employs a mix of uses including residential and commercial services that will serve the local neighbourhood and contribute to establishing complete communities. Parking and site functions (including loading and garbage collection) are located interior to the Site and below- and above-grade, screened from view from the public realm. The buildings are arranged on the Site to provide a sensitive transition from the low-rise neighbourhood. The siting also provides adequate separation from the existing commercial development to the east.

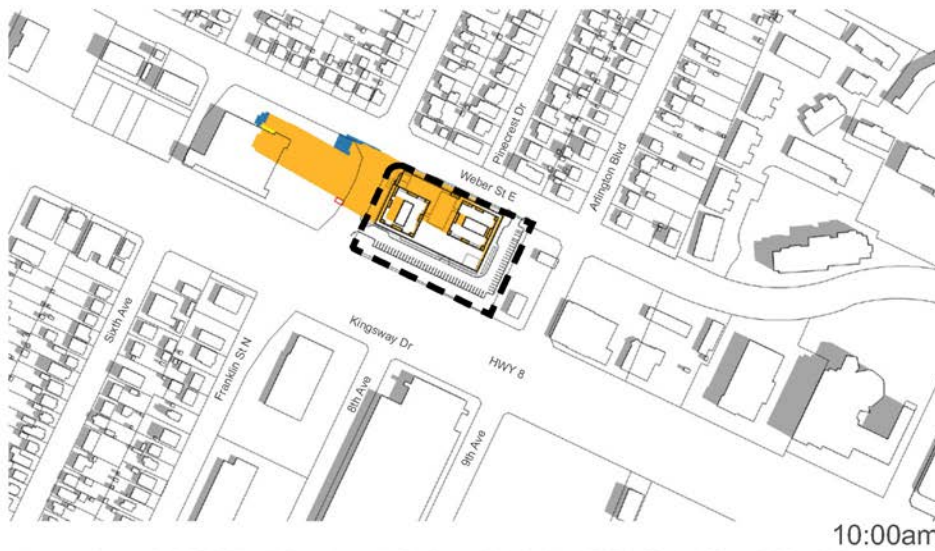
The proposed scale of the development, albeit taller than other buildings existing in the local area, is appropriate to help realize the planned function of the Weber Street for concentrating a mix of uses and higher densities. The scale of the buildings, with appropriate built form that is sensitive to the scale of the surrounding neighbourhood provides human scale proportions relative to the two public streets and mitigates potential shadow impacts to adjacent properties and the public realm through building siting and a thoughtful transition of building height, scale and stepbacks.

The preliminary building elevations include horizontal and vertical articulation (including balconies, architectural projections, staggered tower heights, roofline projections and variation of building materials,

colours) that add visual interest and break down the apparent mass of the building. All parking, loading and servicing facilities, are proposed behind the building, away from the public streets. The siting, landscape design and built form complement the established neighbourhood character and result in a compatible infill development.

# APPENDIX A

Shadow Study Graphics (2021)



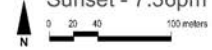
10:00am



12:00pm

- EXISTING SHADOWS
- PREVIOUS NET SHADOWS WITH PROPOSED BUILDING
- ADDITIONAL NEW SHADOW WITH NEW PROPOSED BUILDING
- SHADOW REMOVED WITH NEW PROPOSED BUILDING

**MARCH 21**  
 Sunrise - 7:23am  
 Sunset - 7:36pm

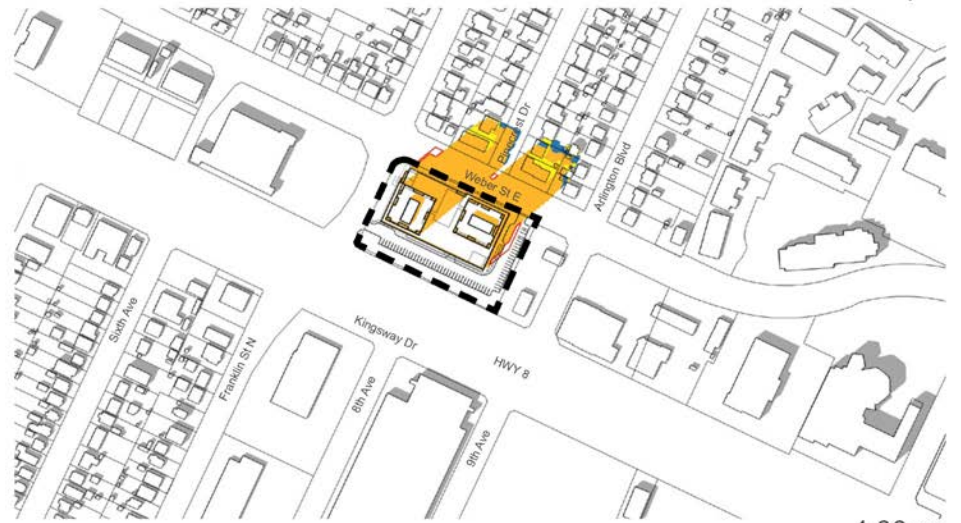


Shadow Analysis

Source: ABA Architects (2021); GSP Group (2021)



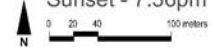
2:00pm



4:00pm

- EXISTING SHADOWS
- PREVIOUS NET SHADOWS WITH PROPOSED BUILDING
- ADDITIONAL NEW SHADOW WITH NEW PROPOSED BUILDING
- SHADOW REMOVED WITH NEW PROPOSED BUILDING

**MARCH 21**  
 Sunrise - 7:23am  
 Sunset - 7:36pm



Shadow Analysis

Source: ABA Architects (2021); GSP Group (2021)







6:00pm

- EXISTING SHADOWS
- PREVIOUS NET SHADOWS WITH PROPOSED BUILDING
- ADDITIONAL NEW SHADOW WITH NEW PROPOSED BUILDING
- SHADOW REMOVED WITH NEW PROPOSED BUILDING



**MARCH 21**

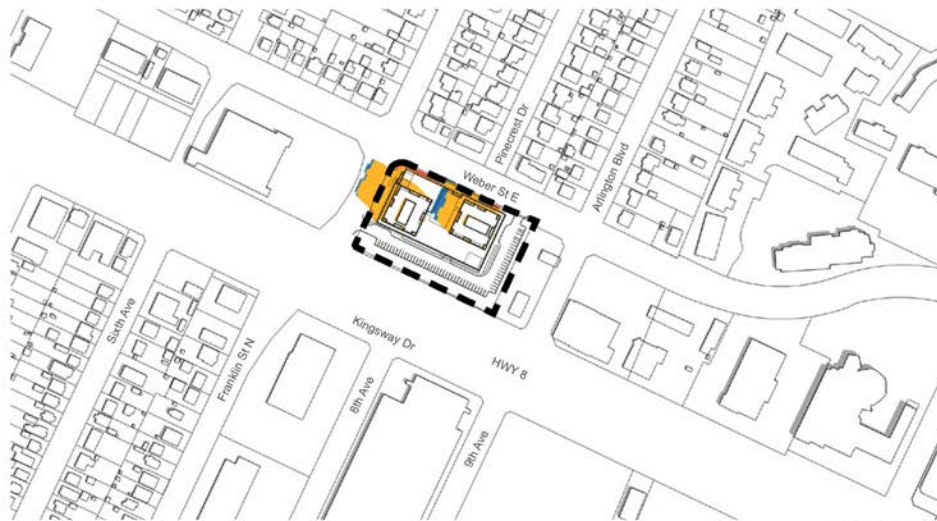
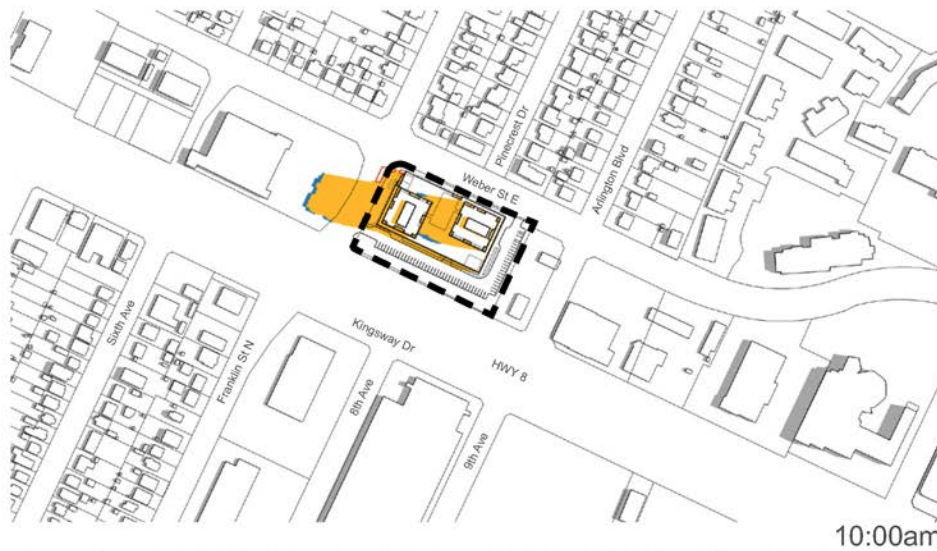
Sunrise - 7:23am

Sunset - 7:36pm



Shadow Analysis

Source: ABA Architects (2021); GSP Group (2021)



- EXISTING SHADOWS
- PREVIOUS NET SHADOWS WITH PROPOSED BUILDING
- ADDITIONAL NEW SHADOW WITH NEW PROPOSED BUILDING
- SHADOW REMOVED WITH NEW PROPOSED BUILDING

12:00pm

**JUNE 21**

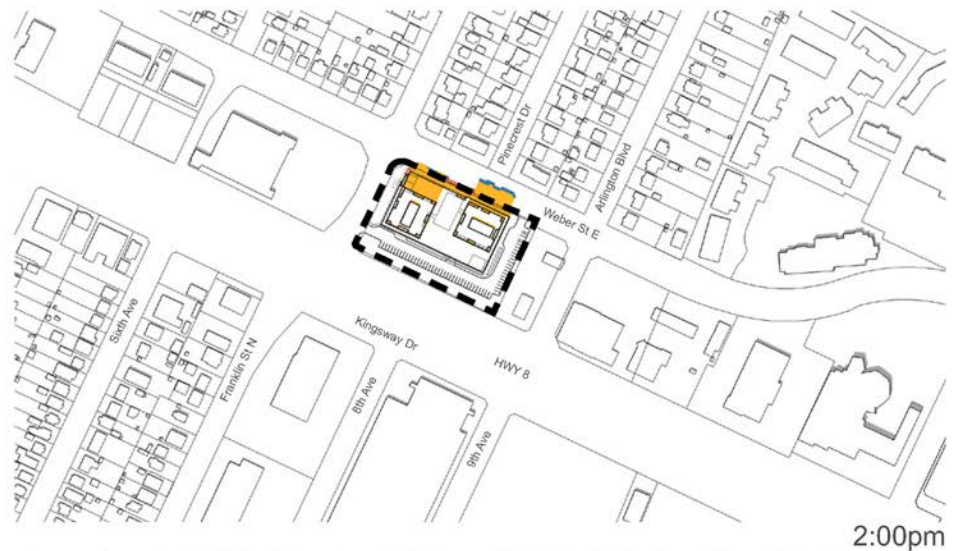
Sunrise - 5:41am

Sunset - 9:06pm



Shadow Analysis

Source: ABA Architects (2021); GSP Group (2021)



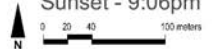
- EXISTING SHADOWS
- PREVIOUS NET SHADOWS WITH PROPOSED BUILDING
- ADDITIONAL NEW SHADOW WITH NEW PROPOSED BUILDING
- SHADOW REMOVED WITH NEW PROPOSED BUILDING

4:00pm

**JUNE 21**

Sunrise - 5:41am

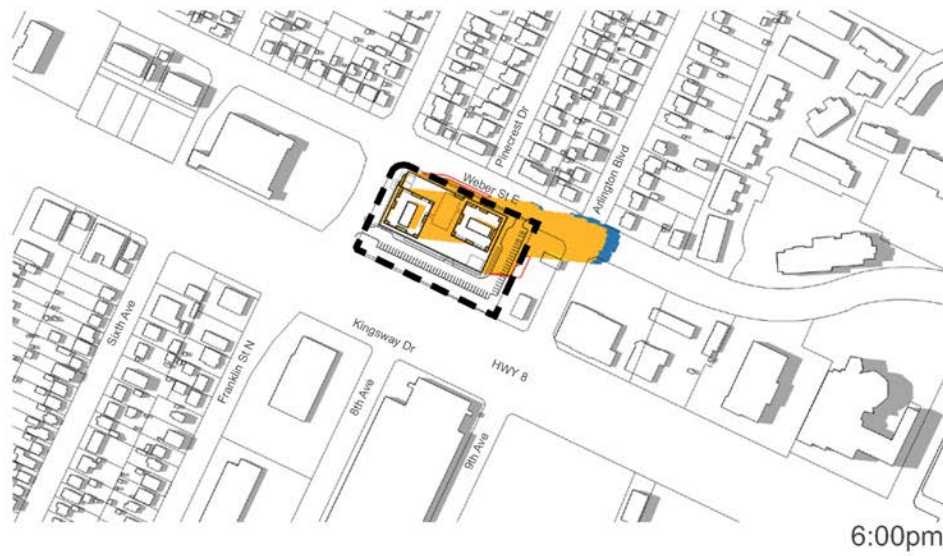
Sunset - 9:06pm



Shadow Analysis

Source: ABA Architects (2021); GSP Group (2021)





6:00pm

- EXISTING SHADOWS
- PREVIOUS NET SHADOWS WITH PROPOSED BUILDING
- ADDITIONAL NEW SHADOW WITH NEW PROPOSED BUILDING
- SHADOW REMOVED WITH NEW PROPOSED BUILDING

**JUNE 21**

Sunrise - 5:41am

Sunset - 9:06pm

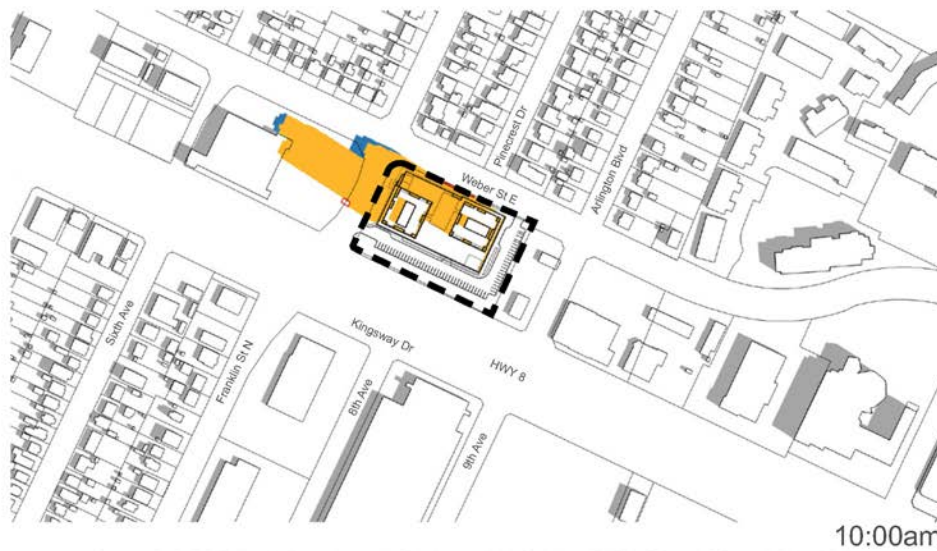


Shadow Analysis

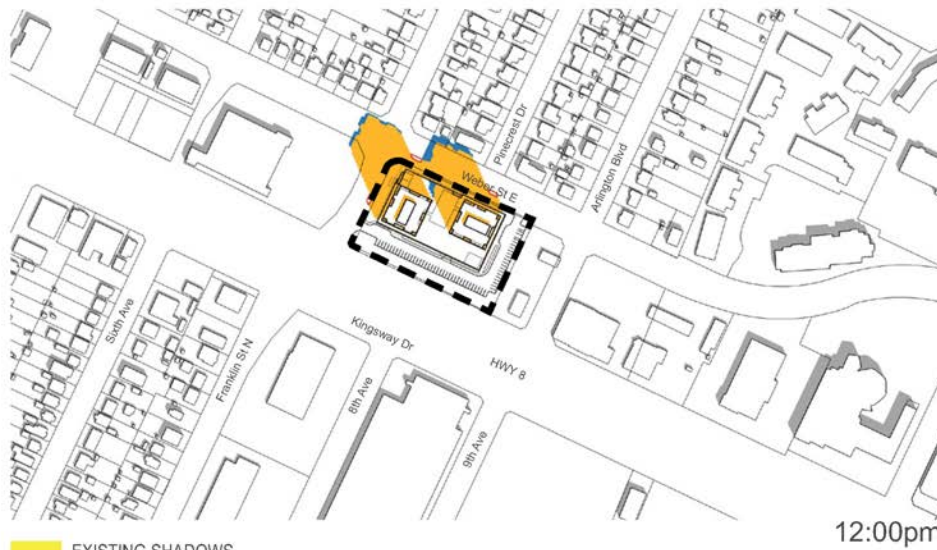
Source: ABA Architects (2021); GSP Group (2021)







10:00am



12:00pm

- EXISTING SHADOWS
- PREVIOUS NET SHADOWS WITH PROPOSED BUILDING
- ADDITIONAL NEW SHADOW WITH NEW PROPOSED BUILDING
- SHADOW REMOVED WITH NEW PROPOSED BUILDING

**SEPTEMBER 21**

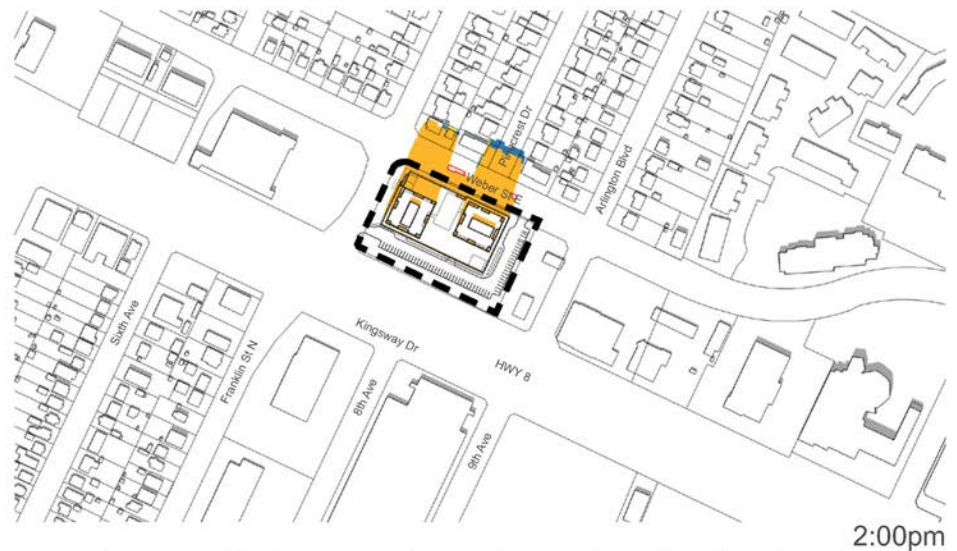
Sunrise - 7:08am

Sunset - 7:20pm



Shadow Analysis

Source: ABA Architects (2021); GSP Group (2021)



2:00pm



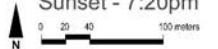
4:00pm

- EXISTING SHADOWS
- PREVIOUS NET SHADOWS WITH PROPOSED BUILDING
- ADDITIONAL NEW SHADOW WITH NEW PROPOSED BUILDING
- SHADOW REMOVED WITH NEW PROPOSED BUILDING

**SEPTEMBER 21**

Sunrise - 7:08am

Sunset - 7:20pm



Shadow Analysis

Source: ABA Architects (2021); GSP Group (2021)





6:00pm

- EXISTING SHADOWS
- PREVIOUS NET SHADOWS WITH PROPOSED BUILDING
- ADDITIONAL NEW SHADOW WITH NEW PROPOSED BUILDING
- SHADOW REMOVED WITH NEW PROPOSED BUILDING



**SEPTEMBER 21**

Sunrise - 7:08am

Sunset - 7:20pm



**Shadow Analysis**

Source: ABA Architects (2021); GSP Group (2021)





10:00am



2:00pm



12:00pm

- EXISTING SHADOWS
- PREVIOUS NET SHADOWS WITH PROPOSED BUILDING
- ADDITIONAL NEW SHADOW WITH NEW PROPOSED BUILDING
- SHADOW REMOVED WITH NEW PROPOSED BUILDING

**DECEMBER 21**

Sunrise - 7:51am

Sunset - 4:48pm



Shadow Analysis

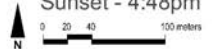
Source: ABA Architects (2021); GSP Group (2021)

- EXISTING SHADOWS
- PREVIOUS NET SHADOWS WITH PROPOSED BUILDING
- ADDITIONAL NEW SHADOW WITH NEW PROPOSED BUILDING
- SHADOW REMOVED WITH NEW PROPOSED BUILDING

**DECEMBER 21**

Sunrise - 7:51am

Sunset - 4:48pm



Shadow Analysis

Source: ABA Architects (2021); GSP Group (2021)

